

REMARKS

The Amendments

Claim 11 is amended to clarify the nature of the A²¹ ring in accordance with the disclosure, for example, at pages 14-15 showing that all the preferred formula II compounds have a cyclohexyl ring at the left side of the formula. This amendment is made in view of the newly cited Kondo reference to distinguish it. It is submitted that the above amendments would put the application in condition for allowance since it clearly distinguishes the sole reference cited against the claims, as discussed below. The amendments do not raise new issues or present new matter and do not present additional claims. The amendments have been made to address the reference cited against the claims for the first time in the Final Office Action. Thus, they were not earlier presented. Accordingly, it is submitted that the requested amendments should be entered.

To the extent that the amendments avoid the prior art or for other reasons related to patentability, competitors are warned that the amendments are not intended to and do not limit the scope of equivalents which may be asserted on subject matter outside the literal scope of any patented claims but not anticipated or rendered obvious by the prior art or otherwise unpatentable to applicants. Applicants reserve the right to file one or more continuing and/or divisional applications directed to any subject matter disclosed in the application which has been canceled by any of the above amendments.

The Rejections under 35 U.S.C. §102 and §103

The rejections of the claims under 35 U.S.C. §102, as being anticipated, or under 35

U.S.C. §103, as being obvious, over Kondo (WO 98/23563 or U.S. Patent No. 6,210,761) are respectfully traversed.

Kondo is directed to liquid crystal compounds of negative dielectric anisotropy of the formula (1) shown therein at col. 2, lines 25-52, for example. The compounds may be provided in compositions with other compounds broadly generically represented by formulae (2) to (12). The breadth of the generic description of Kondo is demonstrated by the multitude of sub-generic formulae shown at cols. 11-33.

OK
but
in
an
original
form
The compounds of Kondo's formula (1), which is the main thrust of the reference, do not meet any of the recitations of the two required and one optional component of applicants' claim 11. These Kondo compounds are disclosed as dielectrically negative yet they are distinct from the dielectrically negative compounds of formula II of claim 11. Kondo does not disclose or suggest that their formula (1) compounds have a cycloalkyl ring at the left hand terminal side of the compound. Compare the amended definition of the A²¹ ring in the instant claims. Since Kondo specifically requires that the ring in this position be a phenyl ring, there would be no suggestion from Kondo to modify its formula (1) compounds to meet the recitations of applicants' formula II.

The Office Action further states that formulae (10)-(12) of Kondo overlap applicants' formula II. Formula (12) no longer overlaps for the same reasons in connection with formula (1) discussed above. As to formulae (10) and (11), they may provide some broad generic overlap but the teaching is very remote due to the fact that such compounds are merely optional in Kondo, they overlap only in a broad generic sense and one of ordinary skill in the art would have had no motivation to pick and choose, from the many options recited in Kondo, compounds meeting the

instant claims.

no
see compound
1
no
see
HB (2,3,4)

Contrary to the statement in the Office Action, Examples 25 and 26 (which refer to Composition Examples 20 and 21) do not anticipate the instant claims – either before or after the amendment to claim 11. No compound in these compositions meets the recitation of any dielectrically negative compound of applicants' formula II. Particularly, no compound meets the recitation of right side terminal ring with L¹ and L² groups therein. Some of the compounds have difluoro-substituted rings but in the 3,5-positions flanking the 4-position terminal group rather than in the 2,3 or 5,6 adjacent positions required by formula II. It is noted that while Composition Examples 1-9 of Kondo include some compounds with a 2,3-difluorinated ring at the right side terminal position, these compositions also do not meet the instant claims because (1) they do not have a cycloalkyl ring at the left side terminal, and/or (2) they do not also contain a dielectrically positive liquid crystal component.

For the above reasons, it is urged that Kondo certainly cannot anticipate the instant claims and the 35 U.S.C. §102 rejection must be withdrawn.


Additionally, Kondo fails to suggest the instant claimed invention to one of ordinary skill in the art and the 35 U.S.C. §103 rejection must also be withdrawn. As outlined above, Kondo provides only the most remote and broadly generic disclosure pertinent to the instant claims. Such a remote and generic disclosure – in the absence of any direction toward the claimed invention – is not a fair suggestion of the invention and not sufficient under 35 U.S.C. §103. See, e.g., In re Jones, 21 USPQ 2d 1941 (Fed. Cir. 1992); and, In re Baird, 29 USPQ2d 1550 (Fed. Cir. 1994). The examples of Kondo point one of ordinary skill in the art away from the claimed invention rather than towards it. Further, there is no other suggestion in the reference

which would guide one of ordinary skill in the art to pick and choose from among the multitude of possibilities encompassed by Kondo the aspects necessary to arrive at applicants' invention.

It is submitted that the application is in condition for allowance. But the Examiner is kindly invited to contact the undersigned to discuss any unresolved matters.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



John A. Sopp, Reg. No. 33,103
Attorney for Applicant(s)

MILLEN, WHITE, ZELANO
& BRANIGAN, P.C.
Arlington Courthouse Plaza 1, Suite 1400
2200 Clarendon Boulevard
Arlington, Virginia 22201
Telephone: (703) 243-6333
Facsimile: (703) 243-6410

Attorney Docket No.: MERCK-2073

Date: September 26, 2002

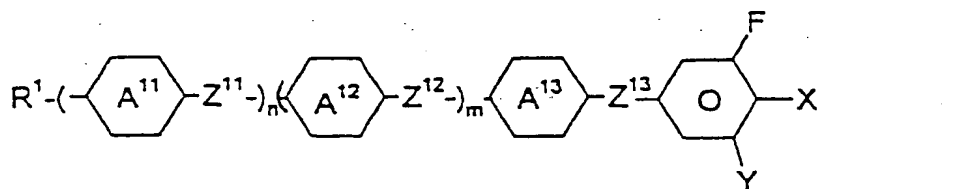
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claim 11 is amended to read as follows (a marked up version of the amended claims is in an appendix attached hereto):

11. (Twice Amended) A nematic liquid-crystal medium, comprising

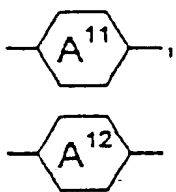
a) one or more dielectrically positive compound(s) of the formula I



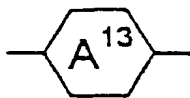
in which

R^1 is alkyl or alkoxy having 1 to 7 carbon atoms, alkoxyalkyl, alkenyl or alkenyloxy having 2 to 7 carbon atoms,

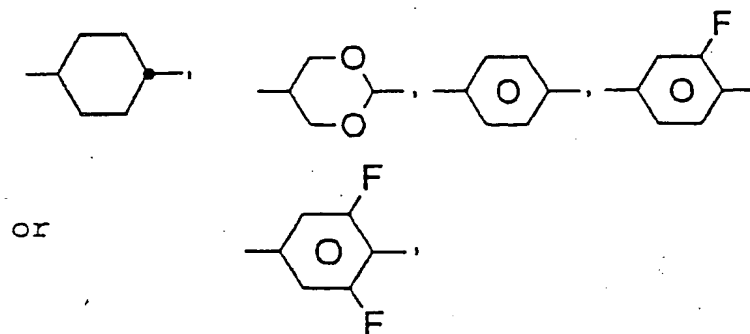
Z^{11} , Z^{12} and Z^{13} are each, independently of one another, $-\text{CH}_2-\text{CH}_2-$, $-\text{CH}=\text{CH}-$, $-\text{C}\equiv\text{C}-$, $-\text{COO}-$ or a single bond,



and



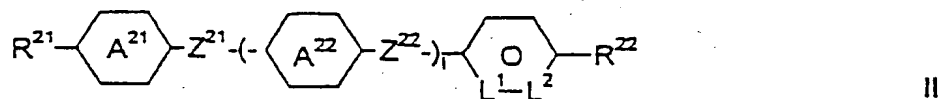
are each, independently of one another,



* \underline{X} is F, or OCF_3 , where, in the case where $X = \text{F}$, Y is F, and in the case where $X = \text{OCF}_3$, Y is H or F, and

n and m are each, independently of one another, 0 or 1;

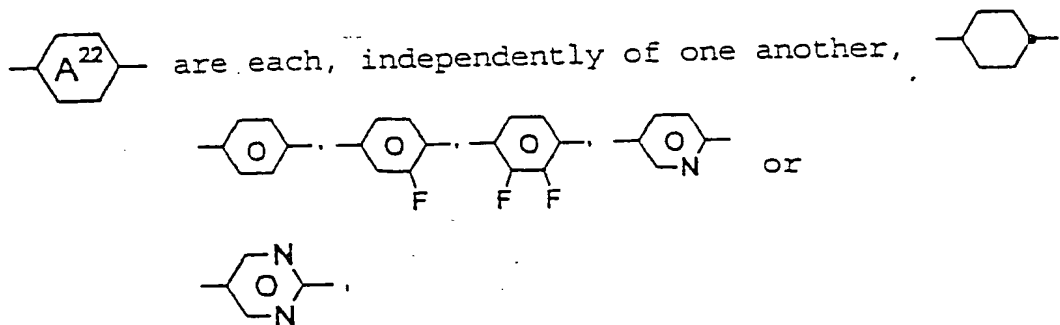
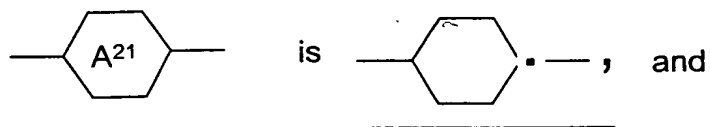
b) one or more dielectrically negative compound(s) of the formula II



in which

R^{21} and R^{22} are each, independently of one another, as defined for R^1 under the formula I,

Z^{21} and Z^{22} are each, independently of one another, as defined for Z^{11} above under the formula I,

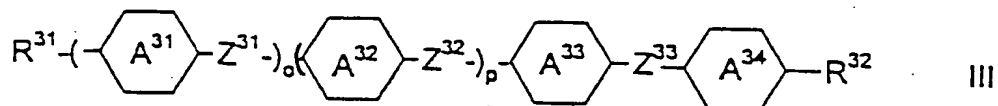


L^1 and L^2 are both C-F or one of the two is N and the other is C-F, and

l is 0 or 1;

and optionally

c) one or more dielectrically neutral compound(s) of the formula III

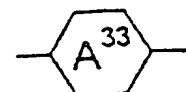
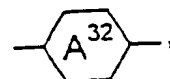
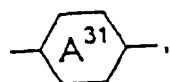


in which

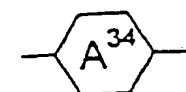
R^{31} and R^{32} are each, independently of one another, as defined for R^1 above under the formula I, and

Z^{31} , Z^{32} and Z^{33} are each, independently of one another, $-\text{CH}_2\text{CH}_2-$, $-\text{CH}_2\text{O}-$, $-\text{OCH}_2-$, -

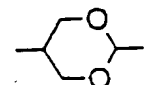
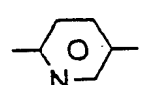
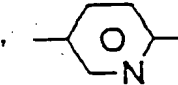
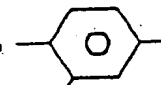
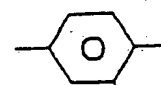
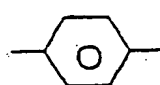
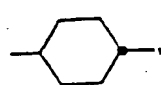
CF₂O-, -OCF₂-, -COO- or a single bond, and, additionally, one of Z³¹, Z³² and Z³³ may also be -
CF₂CF₂-,



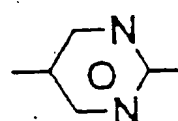
and



are each, independently of one another,



or



and

o and p, independently of one another, are 0 or 1,

wherein the medium has a positive dielectric anisotropy and a birefringence, Δn, of less than or equal to 0.11.